

Antecedent prominence and the Chinese reflexive *ziji*

Jun Lyu & Elsi Kaiser (University of Southern California)

Introduction Chinese reflexive *ziji* ('self') can be bound by a long-distance (LD) antecedent when the antecedent is an *internal* perspective center or an empathy locus (Pan'97; Huang & Liu'01; Charnavel et al.'17; a.o.), the person whom one stands in the shoes of. This property of *ziji* necessitates two predictions: (i) if the non-local antecedent is made more salient as a discourse topic, LD binding should be more acceptable; (ii) if an *external* perspective center (e.g. a 1st person referent representing the perspective of the comprehender) is introduced as the local antecedent, there should be more local binding as a first-person referent is presumably more salient on the discourse level than the 3rd NP (Kuno'87; Pan'97), a phenomenon called the "blocking effect". In this work, besides testing these two hypotheses, we also checked whether syntactic prominence contributes to greater blocking effects, thus helping us understand how top-down (discourse level) and bottom-up (syntactic level) cues guide antecedent retrieval. Furthermore, in all experiments in this study, we examined the influence of verb bias as another bottom-up cue, the interaction of which with discourse-level prominence is not quite clear.

Methods To assess whether *ziji* is sensitive to topic prominence, **Exp.1** (N=45) crossed factors *Context* (biased vs. neutral) and *Verb bias* (self- vs. other-directed). This is used to contrast with **Exp.2** (N=46) on *ta-ziji* ('s/he-self') which supposedly does not involve perspective-taking (Pan'98; Pan & Hu'02). This contrast should lead us to expect more non-local binding in biased contexts for *ziji* than *ta-ziji*. For an example, see (1a-b). **Exp.3** (N=50) and **Exp.4** (N=48) test whether, in the presence of a 1st person pronoun (blocker), the strength of the blocking effect is sensitive to the grammatical role of the blocker (i.e. whether the 1st person pronoun is in subject vs. object position), as subjects are more structurally prominent than objects. *Blocker type* (1st-person vs. 3rd person) and *Verb bias* was crossed in a factorial design. See (2a-b) for examples. Twenty target sentences with 20 fillers were presented to participants in forced choice judgment tasks.

Results See Fig.1-4 for the proportion of local antecedent choices. **Exp. 1** (*ziji*) reveals main effects of *Context* and *Verb bias* (*glmer* in R, $ps < .005$), but no interaction. The preference for the local antecedent was weaker in the presence of a *topical* non-local referent, suggesting *ziji* exhibits prominence sensitivity to discourse topicality. Additionally, self-directed verbs elicited overwhelmingly more local interpretations than other-directed verbs, a strong effect of verb bias. Surprisingly, **Exp.2** (*ta-ziji*) also revealed a significant effect of *Context* ($p < .05$), although cross-experimental analysis suggests that in biased contexts *ziji* showed higher probability of non-local binding than *ta-ziji* ($p < .05$). Additionally, there was a robust *Verb bias* effect ($p < .001$) in the predicted direction (contra Lu'11). **Exp. 3** (*blocker "I" in subj position*) showed main effects of *Verb bias*, *Blocker type*, and an interaction ($ps < .001$). Pairwise comparisons suggest that the 1st-person blocking effect only reached significance with other-directed verbs. This is to be expected, given that the blocker is only relevant when there is a non-local binding tendency in the first place (if *ziji* is interpreted as having a local antecedent, the blocker is redundant). When we compare **Exp. 4** (*blocker "me" in obj position*) to Exp. 3, it becomes clear that the blocking effect was weaker in Exp.4 with other-directed verbs compared to Exp.3: When verb semantics pushes people to look for the non-local antecedent, 'me' is less effective at blocking the non-local search than 'I'. Cross-experimental comparison showed that the subject blocking effect was stronger than the object blocking effect ($p < .01$). *This provides evidence for prominence sensitivity on the grammatical level (subject vs. object.)* (Exp4 shows no Blocker x Verb bias interaction, possibly due to differences in source/perceiver structure of the matrix verbs used in Exp.4. See Kaiser et al.'09).

Discussion In line with the idea that *ziji* prefers higher-prominence referents, we find that *ziji* is sensitive to prominence on (i) the *discourse level* (topicality and perspective), and on (ii) the *grammatical role level* (subj/obj blocker). The grammatical-role effects show that the blocking effect varies as a function of the blocker's structural prominence: when the 1st person blocker is a non-local/non-c-commanding object, blocking is weaker. Verb bias plays a crucial role with both *ziji* and *ta-ziji*, highlighting the impact of pragmatic/semantic information.

Stimuli for topicality effect

(1a) *Biased context (non-local antecedent = discourse topic)*

Ming is a good student in the class. [小明是班级里的优秀学生]

During class, he heard Prof. Wang just {**published_{SELF}/graded_{OTHER}**} (ta)ziji-GEN academic paper.

[课上, 他听说王教授刚刚{发表了/批改了}(他)自己的学术论文]

(1b) *Neutral context (no discourse topic)*

Today is the day for the literature class. [今天是上文学课的日子]

During class, Ming heard Prof. W. just {**published_{SELF}/graded_{OTHER}**} (ta)ziji-GEN academic paper.

[课上, 小明听说王教授刚刚{发表了/批改了}(他)自己的学术论文]

Stimuli for blocking effect

(2a) *First-person vs. third-person referent in subject position:*

Ming is a good student in the class. [小明是班级里的优秀学生]

During class, he heard {**I/Prof. Wang**} just {**published/graded**} ziji-GEN academic paper.

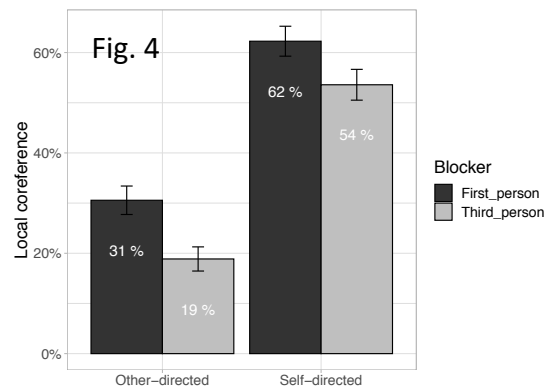
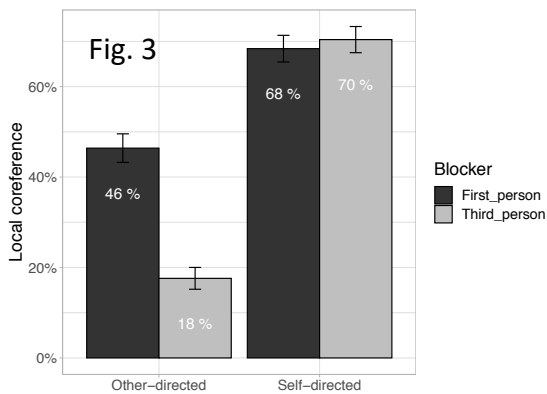
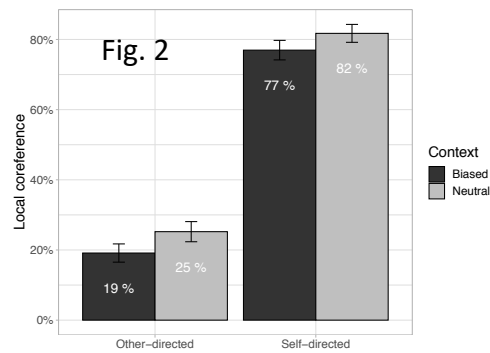
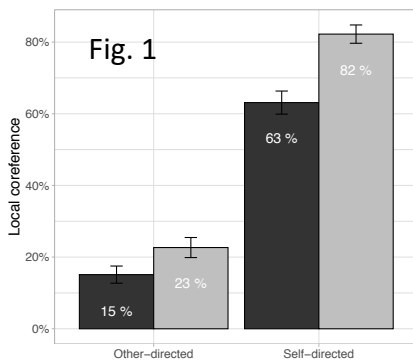
[课上, 他听说{我/王教授}刚刚{发表了/批改了}自己的学术论文]

(2b) *First-person vs. third-person referent in object position:*

Ming is a good student in the class. [小明是班级里的优秀学生]

During class, he told {**me/others**} Prof. W. just {**published/graded**} ziji-GEN academic paper.

[课上, 他告诉{我/别人}王教授刚刚{发表了/批改了}自己的学术论文]



Selected references

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